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| 25297 7590 10/02/2007<br>JENKINS, WILSON, TAYLOR & HUNT, P. A.<br>3100 TOWER BLVD., Suite 1200<br>DURHAM, NC 27707 |             |                       |                              |                        |
|  |             |                       | EXAMINER<br>KAO, WEI PO ERIC |                        |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                 |               |  |
|------------------------------|-----------------|---------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s)  |  |
|                              | 10/796,653      | PALMER ET AL. |  |
|                              | Examiner        | Art Unit      |  |
|                              | Wei-po Kao      | 2616          |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-31 and 33-40 is/are rejected.
- 7) ☒ Claim(s) 14 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/03/2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejection - 35 USC § 103*

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4, 11, 18, 19, 21, 22, 26, 34 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273 in view of the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285.

For Claim 1, Ashdown et al teach that **a method for performing stateful signaling transactions in a distributed processing environment** (see Abstract, Figure 2, Column 4 Line 55-67), **the method comprising: a stateful processing module** (see Column 5 Line 47-49), **a plurality of stateful processing modules** (see Column 7 Line 62-67, Column 8 Line 1-10 i.e. according to SS7 standard, each TCAP transaction is unique and has its own ID, therefore, the apparatus is able to set up to process each transaction with a unique processing module). For Claims 2 and 4, Ashdown et al teach that **the method of wherein receiving a first signaling message includes receiving a TCAP and an ISDN user part (ISUP) message** (see Column 5 Line 40-56) **and wherein the method further comprises buffering TCAP and ISUP messages at the first stateful processing module** (see Column 2 Line 61-67). For Claim 11, Ashdown et al teach that **the method wherein receiving a response to the stateful transaction query**

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message includes receiving the response at a link interface module (see Column 3 Line 50-67, Column 5 Line 13-25). For Claim 22, Ashdown et al teach that **the telecommunications network element wherein the link interface module comprises an SS7 link interface module for sending and receiving SS7 messages and for forwarding signaling connection control part (SCCP) messages to the stateful processing modules** (see Column 3 Line 50-67, Column 5 Line 40-56).

For Claim 1, Ashdown et al do not teach that **he method comprising: (a) receiving a first signaling message; (b) forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules; (c) at the first stateful processing module: (i) generating a transaction query message based on the first signaling message; (ii) inserting an identifier in the transaction query message for identifying the first processing module; and (iii) forwarding the transaction query message to a destination; and (d) receiving a response to transaction query message, the response including the identifier; and (e) using the identifier to distribute the response to the first stateful processing module.** For Claim 11, Ashdown et al do not teach that **the method wherein using the identifier to distribute the response to the first stateful processing module includes decoding the identifier at the link interface module and sending the response to the stateful processing module corresponding to the identifier.**

For Claim 1, the background of Leung et al teach that **the method comprising: (a) receiving a first signaling message** (see [0005] Line 1-5); **(b) forwarding the first signaling message to a**

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first stateful processing module of a plurality of stateful processing modules (see [0004] Line 1-7); (c) at the first stateful processing module: (i) generating a transaction query message based on the first signaling message (see [0005] Line 5-8, [0006-0012]); (ii) inserting an identifier in the transaction query message for identifying the processing module (see [0004]) ; and (iii) forwarding the transaction query message to a destination (see [0005] Line 5-8, [0006-0012]); and (d) receiving a response to transaction query message, the response including the identifier (see [0013-0019], [0020]); and (e) using the identifier to distribute the response to the first stateful processing module (see [0004] Line 1-7). For Claim 11, the background of Leung et al teach that the method wherein using the identifier to distribute the response to the first stateful processing module includes decoding the identifier at the link interface module and sending the response to the stateful processing module corresponding to the identifier (see [0004]). For Claims 18 and 19, the background of Leung et al teach that the method wherein generating a stateful transaction query message includes generating a plurality of stateful transaction query messages, wherein receiving a response includes receiving a response to each query message, and wherein using the identifier to distribute the response includes using the identifier to distribute the response to each query message; the method wherein receiving a response to the stateful transaction query message includes receiving multiple responses to the stateful transaction query message, each response including the identifier, and wherein using the identifier to distribute the response to the first stateful processing module includes using the identifier to distribute each response to the first stateful processing module (see [0004] [0021]).

Ashdown et al and the background of Leung et al are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to set up the apparatus of Ashdown et al with multiple unique processing modules to process each unique TCAP transaction and handle the transactions following the existing SS7 standard definition (identifying a unique transaction is equivalent to identifying a processing module and vice versa).

The motivation would have been that with such set up Ashdown's invention can reduce the number of TCAP transactions, which further reduce the processing load to the entire communication system, with the ease of applying existing SS7 standard definition, which requires no further invention to the definition.

Therefore, it would have been obvious to combine Ashdown et al and the background of Leung et al to obtain the limitations as specified in claim 1.

For Claim 1, Ashdown et al and Leung et al teach all the limitations except that **the transaction query messages are stateful**.

For Claim 1, Park teaches that **the transaction query messages are stateful** (see Abstract, [0012]).

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Claims 21 and 26 are apparatus claims corresponding to method claims 1 and 4 and therefore rejected under the same reason set forth in this paragraph.

Claims 34 and 40 are computer program product claims corresponding to method claims 1 and 11 and therefore rejected under the same reason set forth in this paragraph.

Ashdown et al, the background of Leung et al and Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the stateful information in a transaction query message.

The motivation would have been that Park's method provides a concrete implementation of stateful information insertion to the TCAP messages, which makes the SS7 standard more robust in facing different state of transactions.

Therefore, it would have been obvious to combine Ashdown et al, the background of Leung et al and Park to obtain the claims 1, 2, 4, 11, 18, 19, 21, 22, 26, 34 and 40.

5. Claims 3, 5, 25, 35, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claims 1, 21 and 34 above, and further in view of the invention of Leung et al, U.S. Publication No 20010053218.



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For Claims 3 and 5, Ashdown et al, the background of Leung et al and Park teach all the limitations except that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message.** For Claims 35 and 36, Ashdown et al, the background of Leung et al and Park teach that **the computer program product of wherein receiving a signaling message comprises receiving an ISDN user part (ISUP) and TCAP signaling message and wherein formulating a stateful transaction query message includes buffering the ISUP and TCAP message** (see Column 2 Line 61-67, Column 5 Line 40-56).

For Claims 35 and 36, Ashdown et al, the background of Leung et al and Park do not teach that **the computer program product wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP and ISUP query message.**

For Claims 3 and 5, the invention of Leung et al teaches that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message** (see [0034]). For Claims 35 and 36, the invention of Leung et al teaches that **the computer program product wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message** (see [0034]).

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Claim 25 is an apparatus claim corresponding to method claim 3 and therefore rejected under the same reason set forth in this paragraph.

Ashdown et al, the background and invention of Leung et al and Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the Leung's method to the Ashdown's invention.

The motivation would have been that with Leung's method, Ashdown's invention can further reduced the system load when there are multiple STPs between the SSP and SCP; in addition, it is also desired to apply such load reduction method when different type of transaction messages such as TCAP, ISUP or IP over SS7 are processed.

Therefore, it would have been obvious to combine Ashdown et al, the background and invention of Leung et al and Park to obtain the claims 3, 5, 25, 35 and 36.

6. Claims 6, 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claims 1 and 21 above, and further in view of the background of Park U.S. Publication No 20010046285.

For Claim 6, Ashdown et al, the background of Leung et al and Park teach that **the method of wherein receiving a first signaling message includes receiving a first signaling message** (see Column 5 Line 40-56) **and wherein the method further comprises buffering the first**

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**signaling message at the first stateful processing module** (see Column 2 Line 61-67). For Claim 23, Ashdown et al, the background of Leung et al and Park teach that **the telecommunications network element wherein the link interface module comprises an IP link interface module for sending and receiving IP signaling messages and for forwarding predetermined IP signaling messages to the stateful processing modules** (see Ashdown, Abstract, Column 3 Line 12-14).

For Claim 6, Ashdown et al, the background of Leung et al and Park do not teach that **the first receiving query message is an IP telephony signaling message**. For Claim 23, Ashdown et al, the background of Leung et al and Park do not teach that **the IP link interface module, IP signal messages are IP telephony related**.

For Claim 6, the background of Park teaches that **the first receiving query message is an IP telephony signaling message** (see Figure 1, [0005] Line 8-13). For Claim 23, the background of Park teaches that **the IP link interface module, IP signal messages are IP telephony related** (see Figure 1, [0005] Line 8-13).

Claim 27 is an apparatus claim corresponding to method claim 6 and therefore rejected under the same reason set forth in this paragraph.

Ashdown et al, the background and invention of Leung et al and the background and invention Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the functionality of receiving IP telephony signal message at the Ashdown's apparatus.

The motivation would have been that it is desired for the Ashdown's apparatus to be able handle different telecommunication application such as voice over IP; since SS7 system has been a widely accepted protocol to process voice communication it is only logical to implement VoIP.

Therefore, it would have been obvious to combine Ashdown et al, the background and invention of Leung et al and Park to obtain the claims 6, 23 and 27.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and the background and invention of Park U.S. Publication No 20010046285 as applied to claim 6 above, and further in view of the invention of Leung et al, U.S. Publication No 20010053218.

For Claim 7, Ashdown et al, the background of Leung et al and the background and invention of Park teach all the limitations except that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message.**

For Claim 7, the invention of Leung et al teaches that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message (see [0034]).**

Ashdown et al, the background and invention of Leung et al and the background and invention of Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the Leung's method to the Ashdown's invention.

The motivation would have been that with Leung's method, Ashdown's invention can further reduced the system load when there are multiple STPs between the SSP and SCP; in addition, it is also desired to apply such load reduction method when different type of transaction messages such as TCAP, ISUP or IP over SS7 are processed.

Therefore, it would have been obvious to combine Ashdown et al, the background and invention of Leung et al and the background and invention of Park to obtain the claim 7.

8. Claims 8, 9, 10, 12, 20, 24, 28, 29, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claims 1, 21 and 34 above, and further in view of Redmill, An Introduction to SS7.

For Claim 8, Ashdown et al, the background of Leung et al and Park teach all the limitations except that **the method wherein forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules includes selecting the first stateful processing module from the plurality of stateful processing modules using a load sharing algorithm.** For Claims 9, 10, Ashdown et al, the background of Leung et al and Park

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teach all the limitations except that the method of wherein inserting an identifier in the stateful transaction query message includes placing the identifier in a field in the stateful transaction query message for causing the destination to insert the identifier in the response; The method wherein the stateful transaction query message comprises a transaction capabilities application part (TCAP) message and the field comprises a transaction identifier field in the TCAP message. For Claim 12, Ashdown et al, the background of Leung et al and Park teach that the method wherein receiving a response to the stateful transaction query message includes receiving the response at a link interface module (see Ashdown et al, Column 3 Line 50-67, Column 5 Line 13-25); the method wherein using the identifier to distribute the response to the first stateful processing module includes decoding the identifier at a second stateful processing module and sending the response to the first stateful processing module corresponding to the identifier (see Leung et al, [0004]). For Claims 20, Ashdown et al, the background of Leung et al and Park teach all the limitations except that the method wherein forwarding the stateful transaction query message to a destination includes inserting an entity address of a first signal transfer point of a mated pair of signal transfer points in the stateful transaction query message, forwarding the stateful transaction query message from the first signal transfer point to the destination and wherein receiving the response includes receiving the response at a second signal transfer point of the mated pair of signal transfer points, decoding the response and extracting an entity address from the response, determining that the entity address corresponds to the first signal transfer point, and forwarding the response to the first signal transfer point.

For Claim 12, Ashdown et al, the background of Leung et al and Park do not teach that **the method wherein using the identifier to distribute the response to the first stateful processing module includes forwarding the response to a second stateful processing module using a load sharing algorithm.**

For Claim 8, Redmill teaches that **the method wherein forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules includes selecting the first stateful processing module from the plurality of stateful processing modules using a load sharing algorithm** (see Page 9 Line 12-16, Page 14 Line 32-39). For Claim 9, 10, Redmill teaches that **the method of wherein inserting an identifier in the stateful transaction query message includes placing the identifier in a field in the stateful transaction query message for causing the destination to insert the identifier in the response; The method wherein the stateful transaction query message comprises a transaction capabilities application part (TCAP) message and the field comprises a transaction identifier field in the TCAP message** (see Page 12-13 Section 4.5). For Claim 12, Redmill teaches that **the method wherein using the identifier to distribute the response to the first stateful processing module includes forwarding the response to a second stateful processing module using a load sharing algorithm** (see Page 14 Line 32-39). For Claim 20, Redmill teaches that **the method wherein forwarding the stateful transaction query message to a destination includes inserting an entity address of a first signal transfer point of a mated pair of signal transfer points in the stateful transaction query message, forwarding**

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the stateful transaction query message from the first signal transfer point to the destination and wherein receiving the response includes receiving the response at a second signal transfer point of the mated pair of signal transfer points, decoding the response and extracting an entity address from the response, determining that the entity address corresponds to the first signal transfer point, and forwarding the response to the first signal transfer point (see Page 5-7 Section 3).

Claims 24, 28 and 29 are apparatus claims corresponding to method claims 12, 9 and 10 and therefore rejected under the same reason set forth in this paragraph.

Claims 38 and 39 are computer program product claims corresponding to method claims 9 and 10 and therefore rejected under the same reason set forth in this paragraph.

Ashdown et al, the background of Leung et al, Park and Redmill are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the load-sharing algorithm to distribute messages among a plurality of processing modules; include ID in the TCAP message to identify each transaction.

The motivation would have been that with load sharing algorithm, a fail processing module will not cause a communication between two SPs to break down especially when the traffic is heavy; it is desired to have a flow mechanism to control great amount of data traffic between two SPs.



Therefore, it would have been obvious to combine Ashdown et al, the background of Leung et al, Park and Redmill to obtain the claims 8, 9, 10, 12, 20, 24, 28, 29, 38 and 39.

9. Claims 13 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285.

For Claim 13, Ashdown et al, the background of Leung et al and Park teach all the limitations except that the method wherein using the identifier to distribute the response includes forwarding the response to a distribution module, however, examiner takes official notice that it is well known in the art to use a centralized module to distribute data information.

Claim 30 is an apparatus claim corresponding to method claim 13 and therefore rejected under the same reason set forth in this paragraph.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the distribution module in the Ashdown's invention.

The motivation would have been that centralized distribution mechanism allows users to monitor the traffic at the node with ease.

Therefore, it would have been obvious to combine Ashdown et al, the background of Leung et al, Park to obtain the claims 13 and 30.

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10. Claims 15 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claims 1 and 21 above, and further in view of Brockman et al, U.S. Patent No 6249572.

For Claim 15, Ashdown et al, the background of Leung et al and Park teach all the limitations except that **the method comprising formulating a transaction detail record (TDR) based on the stateful transaction.**

For Claim 15, Brockman et al teach that **the method comprising formulating a transaction detail record (TDR) based on the stateful transaction** (see Abstract, Column 2 Line 42-48).

Claim 33 is an apparatus claim corresponding to method claim 15 and therefore rejected under the same reason set forth in this paragraph.

Ashdown et al, the background of Leung et al, Park and Brockman et al are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the record tracking method to the Ashdown's invention.

The motivation would have been that it is desired to have a TCAP transactions monitoring system to correlate the TCAP transactions split scattering around different links between any pair of SPs.

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Therefore, it would have been obvious to combine Ashdown et al, the background of Leung et al, Park and Brockman et al to obtain the claims 15 and 33.

11. Claims 16 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claims 1 and 21 above, and further in view of the background of Ashdown et al, U.S. Patent No 6625273.

For Claim 16, Ashdown et al, the background of Leung et al and Park teach all the limitations except that **the method wherein steps (a)-(e) are performed at a signal transfer point (STP).**

For Claim 16, the background of Ashdown et al teaches that **the method wherein steps (a)-(e) are performed at a signal transfer point (STP)** (see Column 2 Line 33-42).

Claim 31 is an apparatus claim corresponding to method claim 16 and therefore rejected under the same reason set forth in this paragraph.

The background and invention of Ashdown et al, the background of Leung et al and Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the Ashdown's invention directly at the STP levels.

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The motivation would have been that although it is cost prohibitive for smaller operators, it is on the other hand desired for the bigger operators who already own the STPs to incorporate the invention without implementing new devices.

Therefore, it would have been obvious to combine the background and invention of Ashdown et al, the background of Leung et al and Park to obtain the claims 16 and 31.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claim 1 above, and further in view of Sprague et al, U.S. Publication No 20030231652.

For Claim 17, Ashdown et al, the background of Leung et al and Park teach all the limitations except that **the method wherein the stateful transaction query messages and the response comprise IP-based messages.**

For Claim 17, Sprague et al teach that **the method wherein the stateful transaction query messages and the response comprise IP-based messages** (see Abstract).

Ashdown et al, the background of Leung et al, Park and Sprague et al are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the method of Sprague to transmit SS7 messages over an IP network.

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The motivation would have been that it is desired to allow users to communicate across different communication network especially when SS7 is the most widely adapted voice communication network and IP is the most widely adapted data network.

Therefore, it would have been obvious to combine Ashdown et al, the background of Leung et al, Park and Sprague et al to obtain the claim 17.

13. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashdown et al, U.S. Patent No 6625273, the background of Leung et al, U.S. Publication No 20010053218 and Park U.S. Publication No 20010046285 as applied to claim 34 above, and further in view of the background of Park U.S. Publication No 20010046285 and the invention of Leung et al, U.S. Publication No 20010053218.

For Claim 37, Ashdown et al, the background of Leung et al and Park teach that **the method of wherein receiving a first signaling message includes receiving a first signaling message** (see Column 5 Line 40-56) **and wherein the method further comprises buffering the first signaling message at the first stateful processing module** (see Column 2 Line 61-67).

For Claim 37, Ashdown et al, the background of Leung et al and Park do not teach that **the first receiving query message is an IP telephony signaling message**.

For Claim 37, the background of Park teaches that **the first receiving query message is an IP telephony signaling message** (see Figure 1, [0005] Line 8-13).

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Ashdown et al, the background and invention of Leung et al and the background and invention Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the functionality of receiving IP telephony signal message at the Ashdown's apparatus.

The motivation would have been that it is desired for the Ashdown's apparatus to be able handle different telecommunication application such as voice over IP; since SS7 system has been a widely accepted protocol to process voice communication it is only logical to implement VoIP.

Therefore, it would have been obvious to combine Ashdown et al, the background and invention of Leung et al and Park to obtain the limitations of the claims 37.

For Claim 37, Ashdown et al, the background of Leung et al and the background and invention of Park teach all the limitations except that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message.**

For Claim 37, the invention of Leung et al teaches that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message (see [0034]).**

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Ashdown et al, the background and invention of Leung et al and the background and invention of Park are analogous art because they are from same field of endeavor.

At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the Leung's method to the Ashdown's invention.

The motivation would have been that with Leung's method, Ashdown's invention can further reduced the system load when there are multiple STPs between the SSP and SCP; in addition, it is also desired to apply such load reduction method when different type of transaction messages such as TCAP, ISUP or IP over SS7 are processed.

Therefore, it would have been obvious to combine Ashdown et al, the background and invention of Leung et al and the background and invention of Park to obtain the claim 37.

### *Allowable Subject Matter*

14. Claims 14 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter:

For claims 14 and 32, prior art fails to show alone or in combination that the stateful transaction query message and response message comprise transaction location information.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Khello et al, U.S. Patent No 6611584 is cited to show a similar method and system to handle transactions using TCAP in a SS7 network.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wei-po Kao whose telephone number is (571)270-3128. The examiner can normally be reached on Monday through Friday, 8:30AM to 5:00PM.

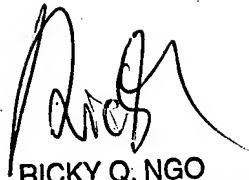
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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W.K.

A handwritten signature in black ink, appearing to read 'Ricky Q. Ngo', is positioned above the printed name.

RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER